



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/580,147	03/30/2007	Gurmit Singh-Gill	AJPARK38.001APC	9247

20995 7590 03/01/2010
KNOBBE MARTENS OLSON & BEAR LLP
2040 MAIN STREET
FOURTEENTH FLOOR
IRVINE, CA 92614

EXAMINER

BLAND, LAYLA D

ART UNIT	PAPER NUMBER
----------	--------------

1623

NOTIFICATION DATE	DELIVERY MODE
-------------------	---------------

03/01/2010

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

jcartee@kmob.com
efiling@kmob.com

Office Action Summary	Application No. 10/580,147	Applicant(s) SINGH-GILL ET AL.	
	Examiner LAYLA BLAND	Art Unit 1623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 December 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 2, 4, 5, 7-9, 11-13 and 20-28 is/are pending in the application.
- 4a) Of the above claim(s) 13 and 20-28 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 4, 5, 7-9, 11, 12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This office action is a response to Applicant's amendment submitted December 7, 2009, wherein claims 1, 8, 9, and 11 are amended and claims 3, 6, 10, 14-19, and 29-34 are canceled.

Claims 1, 2, 4, 5, 7-9, 11-13, and 20-28 are pending.

Claims 13 and 20-28 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on June 23, 2009.

Claims 1, 2, 4, 5, 7-9, 11, and 12 are examined on the merits herein.

In view of the cancellation of claim 30, all rejections made with respect to that claim in the previous office action are withdrawn.

In view of Applicant's amendment submitted December 7, 2009, the rejection of claims 1, 2, 4, 5, 7-9, 11, 12, and 30 under 35 U.S.C. 112, second paragraph for being indefinite with respect to linear or branched connectivity of R_3 and R_4 is withdrawn. The claim now requires that C_a and C_b are directly connected to B and D, respectively, so the claims are interpreted to mean that R_3 and R_4 cannot be linear with respect to the linker. In view of this interpretation, it is also considered that there is only one D, and D can be only be connected to E at one position (in other words, E cannot have multiple bonds to multiple D's). The rejection of claim 11 as being contradictory to claim 1 is withdrawn.

In view of Applicant's amendment submitted December 7, 2009, the rejection of claims 1, 2, 4, 5, 7, 8, and 9 under 35 U.S.C. 102(b) as being anticipated by van Boeckel et al. is withdrawn. The amended claims require that C_a is linked to B and C_b is linked to D. Thus, van Boeckel's compound is one wherein R₃=H and R₄=CH₂OH, which is excluded by proviso.

In view of Applicant's amendment submitted December 7, 2009, the rejection of Claims 1, 2, 4, 5, 7-9, and 12 under 35 U.S.C. 102(b) as being anticipated by Severn et al. is withdrawn. In Severn's compound, E is inositol (cyclohexyl substituted by hydroxyl groups). Applicant's amended definition of E is interpreted to mean that when E is cyclohexyl, the cyclohexyl group is either unsubstituted or is only substituted with a sugar moiety. It is noted that when E is cyclohexyl, a sugar moiety would necessarily be present in the form of D. The claim is interpreted to mean that the optional sugar substitution is in addition to D.

The provisional rejection of claims 1, 2, 4, 5, 7-9, and 12 on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-16 of copending Application No. 10/311,340 is withdrawn because Application No. 10/311,340 is abandoned.

The following new rejections were necessitated by Applicant's amendment submitted December 7, 2009, wherein the definition of E was significantly changed.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1, 2, 4, 5, 7, 8, 9, 11, and 12 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The claims were amended such that E can be a cyclohexyl unsubstituted or substituted with a sugar moiety, and that R₃ or R₄ can be a CH₂ linked to a group that consists of one or more sugar moieties. Applicant has indicated that support for this amendment can be found on page 9, lines 15-17 of the specification and in compounds 15, 44, and 47. Page 9 of the specification says that the linker may have functionality which allows the attachment of sugar chains, such as hydroxyl groups. However, it appears that this description refers to the attachment of D. The specification, page 8, says that D may comprise two or more separate sugar moieties attached to E at different sites, and it is considered that the paragraph on page 9 refers to such an arrangement. The examiner's interpretation of the amended claims is that only one D may be attached to E at one site, and that the linker can contain another sugar moiety apart from D. However, the amended claims are broader than the previous claims and the description in the specification because the additional sugar moieties are not limited or defined. The

Art Unit: 1623

specification (page 8) requires that D is selected from D-mannose, D-galactose, D-glucose, D-glucosamine, N-acetylglucosamine and 6-deoxy-L-mannose, but the additional sugars now recited in the claims are not limited to these. The specification supports inclusion of additional sugar moieties which fall within the definition of D, but not additional sugar moieties which fall outside that definition. This is a new matter rejection.

Claim 8 is amended such that D can comprise an “ α -1,2 and/or α -1,6 linked sugar moiety.” Because “an oligosaccharide chain of 2 to 12 α -1,2 and/or α -1,6 linked sugar moieties,” is also recited in claim 8, it is considered that the amendment broadens the definition of D beyond 2 to 12 linked sugar moieties. Because the sugar moiety is α -1,2 and/or α -1,6 linked, it is considered that at least 2 sugar moieties must be present in order to be linked as such, so the amendment must broaden the upper limit of the range of sugar moieties. The specification does not provide support for D larger than 12 linked sugar moieties. There are no examples wherein D is larger than 12 sugar moieties and no mention in the specification of D larger than 12 sugar moieties. This is a new matter rejection.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

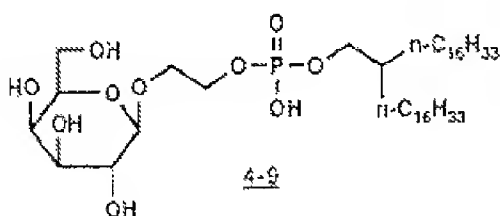
A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 4, 5, 7, 9, and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Kenkyusho (JP 06271597, PTO-1449 submitted June 7, 2007).

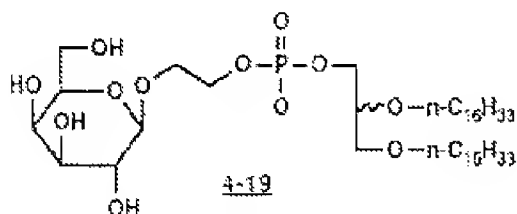
The translation of this document submitted by Applicant does not include the drawings. A copy of the Japanese patent including the drawings is attached herein.

Kenkyusho teaches the following compound [compound 4-9, page 12]:



In this compound, A represents R wherein R is a branched alkyl of 34 carbon atoms, E is $-C_aHR_3-C_bHR_4-$ wherein R_3 and R_4 are both H, and D is galactose. Compound 4-11, also on page 12, is similar to the above compound except that R is a linear alkyl of 16 carbons.

Kenkyusho also teaches the following compound [page 13, compound 4-19]:

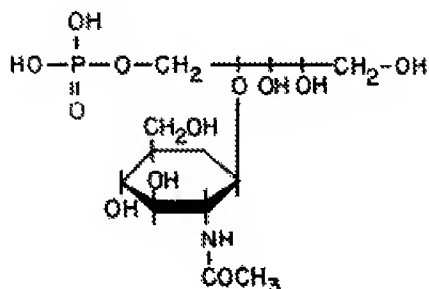


In this compound, A represents Ia wherein R_1 and R_2 are linear alkyl groups of 16 carbons, E is $-C_aHR_3-C_bHR_4-$ wherein R_3 and R_4 are both H, and D is galactose.

The compounds are placed into a composition comprising water [paragraph 0039 of the translated document].

Claims 1, 5, 7, 9, and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Sanderson et al. (The Journal of Biological Chemistry, Vol. 237, No. 12, December 1982, pp. 3603-3613).

Sanderson teaches the following compound [page 3611, Figure 14]:



In this compound, A is R wherein R is H, E is $-C_aHR_3-C_bHR_4-$ wherein R_3 is H and R_4 is $(CH(OH))_m-CH_2OH$ and m is 2, and D is N-acetylglucosamine. The compound was in water [page 3611, discussion].

Claim 5, 7, and 8 are not interpreted to require a compound containing fatty acids. Rather, claims 5, 7, and 8 are interpreted to limit the definition of R_1 and R_2 . R_1 and R_2 are not required by the claims – alternatively, A can be represented by R as recited in claim 1. Thus, claims 5, 7, and 8 are also rejected.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

Art Unit: 1623

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kenkyusho (JP 06271597, PTO-1449 submitted June 7, 2007).

Kenkyusho teaches as set forth above, compounds wherein D is a monosaccharide, but does not exemplify compounds wherein D is an oligosaccharide chain. It would have been obvious to one of ordinary skill in the art at the time the invention was made to prepare compounds having 2-12 linked sugar moieties because Kenkyusho teaches that oligosaccharide derivatives are also suitable.

Conclusion

No claims are allowed.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

Art Unit: 1623

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LAYLA BLAND whose telephone number is (571)272-9572. The examiner can normally be reached on Monday - Friday, 7:00 - 3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anna Jiang can be reached on (571) 272-0627. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1623

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Layla Bland/
Examiner, Art Unit 1623

/Shaojia Anna Jiang/
Supervisory Patent Examiner
Art Unit 1623